

REMARKS

Applicant has studied the Office Action dated October 22, 2004, and has made amendments to the claims. Claims 3-10, 12, 13, 16-19 and 21-37 are pending. Claims 3, 5, 7, 16, 19, 24, 30, 35 and 36 are independent claims. Claims 1, 2, 11, 14, 15 and 20 have canceled without prejudice. Claims 3-10, 12, 13, 16-19, 21 and 22 have been amended. New claims 23-37 have been added. No new matter has been entered. It is submitted that the application, as amended, is in condition for allowance. Reconsideration and reexamination are respectfully requested.

Amendments to Drawings

An amendment has been made to the FIGS. 1, 2 and 12 in response to objections by the Examiner and to FIGS. 5, 11 and 12 to more clearly disclose the invention. No new matter has been added as the amendments have support in the application as originally filed.

Amendments to the Specification

Amendments have been made to the specification at pages 11 and 15 in response to objections by the Examiner. Additional amendments have been made to pages 13, 15 and 18-21 to correct typographical errors and more clearly disclose the invention. No new matter has been added as the amendments have support in the specification and drawings as originally submitted.

Objection to Drawings

The Examiner objected to FIGS. 1 and 2 as not properly designating by a legend those drawings that illustrate prior art per MPEP 608.02(g) and to FIG. 12 due to a typographical error. Specifically, the examiner asserted that FIGS. 1 and 2 should be designated as "Prior Art."

With this paper, FIGS 1 and 2 have been designated as "Prior Art" and FIG. 5 has been amended to correct the typographical error. It is respectfully submitted that the grounds for objection have been overcome and it is respectfully requested that the Examiner withdraw the objections.

Objections to Specification

The Examiner objected to the specification due to informalities. Specifically, the Examiner asserted that there are typographical errors on page 11, line 2 and page 15, line 15.

With this paper, the specification has been amended at pages 11 and 15 to correct the typographical errors. It is respectfully submitted that the grounds for objection have been overcome and it is respectfully requested that the Examiner withdraw the objections.

Claim Objections

The Examiner objected to claims 8, 10 and 15 due to informalities. Specifically, the Examiner asserted the following:

Claim 8, line 9 contains a typographical error ("outputted"). With this paper, claim 8 has been amended to delete "outputted."

Claim 10, line 9 contains a typographical error ("frmm"). With this paper, claim 10 has been amended to replace "frmm" with "from."

The limitation "a multiplier ... transmits it to the two base stations" in claim 15 contains a typographical error and it was suggested that "multiplier" should be replaced with "multipliers." With this paper, claim 15 has been canceled without prejudice, thereby rendering the objection moot.

It is respectfully submitted that the grounds for objection have been overcome and it is respectfully requested that the Examiner withdraw the objections.

§ 112 Rejections

The Examiner rejected claims 9, 12, 13, 16-18 and 20-22 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Specifically, the Examiner made the following assertions:

The limitation "receiving signals other than the signals inputted to the first combiner among the signals outputted from the first demultiplexer and signals other than the signals outputted from the second [de]multiplexer" in claim 9 is unclear as it is not understood what signals the second combiner receives. With this paper, claim 9 has been amended to recite "receiving ... signals from the first demultiplexer other than the signals received by the first combiner from the first demultiplexer and signals from the second demultiplexer other than the signals received by the first combiner from the second demultiplexer." It is respectfully submitted that the claim now clearly recites the signals that the second combiner receives.

The limitation "performing rate matching at different rates for the codeword bit streams" in claim 16 is unclear as it is not understood what "different rates" means in the context of the claim in that it is not clear if the rates are different for two output streams or the rates are

different for input and output streams. With this paper, claim 16 has been amended to recite “performing rate matching at different rates for the coded bit stream and the interleaved coded bit stream.” It is respectfully submitted that the claim now clearly recites that rates are different for the “coded bit stream” and the “interleaved coded bit stream.”

The limitation “the three signals outputted from the code combiner” at line 3 of claims 12, 13, 21 and 22 has insufficient antecedent basis. With this paper, claims 12 and 21 have been amended to recite “ a first, second and third kind of data stream” in the preamble and to replace the phrase “two of the three signals” with “the first and second bit streams” at line 3. Furthermore, claims 13 and 22 have been amended to delete the phrase “the three signals,” thereby rendering the objection moot with respect to those claims. It is respectfully submitted that there is sufficient antecedent basis for the phrase “the first and second bit streams” at line 3 of claims 12 and 21.

The step “receiving the signals classified by kinds and classifying them again by kinds” in claim 20 is unclear as it is not understood as written. With this paper, claim 20 has been canceled without prejudice, thereby rendering the objection moot.

The Examiner did not indicate any specific grounds for the rejection of claims 17 and 18. Therefore, it is assumed that the rejection of claims 17 and 18 is due to their dependence on claim 16.

In view of the cancellation of claim 20 and the amendments to claims 9, 12, 13, 16, 21 and 22, it is respectfully submitted that the grounds for objection have been overcome and it is respectfully requested that the Examiner withdraw the objections.

§ 102 Rejections

Claims 1-3, 5, 7, 10, 14-16 and 19 were rejected under 35 U.S.C. § 102(e) as being anticipated by Yi (U.S. Patent No. 5,978,365). This rejection is respectfully traversed.

With this paper, claims 1, 2, 14 and 15 have been canceled without prejudice, thereby rendering the rejection moot with respect to those claims. It is respectfully requested that the rejection be withdrawn.

It is respectfully noted that a proper rejection for anticipation under § 102 requires complete identity of invention. The claimed invention, including each element thereof as recited in the claims, must be disclosed or embodied, either expressly or inherently, in a single reference. Scripps Clinic & Research Found. v. Genentech Inc., 927 F.2d 1565, 1576, 18 U.S.P.Q.2d 1001, 1010 (Fed. Cir. 1991); Standard Havens Prods., Inc. v. Gencor Indus., Inc., 953 F.2d 1360, 1369, 21 U.S.P.Q.2d 1321, 1328 (Fed. Cir. 1991).

With regard to the rejection of independent claim 3, 5 and 16, which have been amended to more clearly disclose the invention, it is respectfully noted that all three claims recite performing rate matching for both coded bit streams to generate two rate matched bit streams and outputting the rate matched bit streams. It is respectfully submitted that Yi fails to disclose either of these limitations.

The Examiner, at paragraph 12 of the Office action, asserts that the “puncturers 603 A and B on Fig. 6 and 7, [column] 14[, lines] 34-42” of Yi disclose “first and second rate matching algorithm processing units for receiving the output streams and generating outputs of different patterns” and the [m]ultiplexers 604 and 605 on Fig. 6 and 7, [column] 14[, lines] 43-64 of Yi disclose “ first and second multiplexers for sequentially outputting the codeword streams generated by the first and the second rate matching processing units.” Applicant respectfully disagrees with the Examiner’s interpretation of the Yi reference.

It is respectfully submitted that the rate matching units (“603A and 603B”) disclosed by Yi do not rate match **all** the bit streams and, therefore, the multiplexers (“604 and 605”) disclosed by Yi do not output only rate matched bit streams. See Yi FIGS. 6 and 7 which illustrate uncoded data streams “X1” and “X2,” which are not rate matched, are also multiplexed to the base stations and col. 14, lines 39-42 which indicates “punctured (rate matched according to the Examiner) parity sequence outputs are multiplexed with the data streams X1 and X2, which represent unaltered (i.e. not rate matched) source sequences.”

It is respectfully asserted that Yi does not disclose each element of independent claims 3, 5 and 16 and, therefore, claims 3, 5 and 16 are allowable over the cited reference.

With regard to the rejection of independent claim 7, it is respectfully noted that, with this paper, independent claim 7 has been amended to incorporate the allowable subject matter from claim 11 indicated by the Examiner. Therefore, it is respectfully asserted that claim 7, and claim 10, which depends from claim 7, are allowable over the cited reference.

With regard to the rejection of independent claim 19, it is respectfully noted that, with this paper, independent claim 19 has been amended to incorporate elements of claim 20 to recite that the code combiner converts the signals from the two base stations by interleaving the signals classified by kinds and restoring the interleaved signals to their original signals, deinterleaving the restored signals to a single kind of signal, and classifying the received classified signals again by kinds. It is respectfully submitted that Yi fails to disclose these limitations.

It is respectfully noted that the Examiner has not rejected claim 20, nor has the Examiner addressed the limitations recited by claim 20 in the present Office action. It is further

respectfully noted that, with regard to the rejection of claim 19, the Examiner asserts, at paragraph 13 of the Office action, that the “decoder 806 on Fig. 8 and [column] 17[, lines] 35-54” of Yi discloses the “code combiner” and the “decoder 806 on Fig. 8 and [column] 17[, lines] 55-60” of Yi discloses the “repeating decoder.”

It is respectfully submitted that the figures and portions of Yi cited by the Examiner fail to disclose a “code combiner” or “repeating decoder” for interleaving the signals classified by kinds and restoring the interleaved signals to their original signals, deinterleaving the restored signals to a single kind of signal, and classifying the received classified signals again by kinds, as recited by claim 19. Therefore, it is respectfully asserted that independent claim 19 is allowable over the cited reference.

§ 103 Rejections

Claim 8 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Yi. This rejection is respectfully traversed.

As previously asserted, independent claim 7 is allowable over Yi. Therefore, it is respectfully asserted that claim 8, which depends from claim 7, also is allowable over the cited reference.

Claims 4, 6, and 17 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Yi in view of TSG-RAN recommendation (TSG-RAN Working group 1 (Radio) meeting #8, 12-15 October 1999, 3GPP) hereinafter referred to as “TSG-RAN.” This rejection is respectfully traversed.

The Examiner indicates, at paragraph 19 of the Office action, that “Yi does not teach matching algorithm with different initial offset values” and asserts that TSG-RAN “teaches different initial offset values (introduction).” Applicant respectfully disagrees with the Examiner’s interpretation of TSG-RAN.

It is respectfully noted that TSG-RAN discloses, in the introduction, “the initial offset value ... should be replaced.” It is further respectfully noted that TSG-RAN is directed to “show[ing] the effects of changing the initial offset to ‘1’” and nowhere in the reference is it taught to use “different initial offset values.”

It is respectfully submitted that teaching to “replace” the initial offset value is not the same as teaching “different initial offset values,” as asserted by the Examiner. Therefore, it is respectfully asserted that claims 4, 6 and 7 are allowable over the cited references.

Furthermore, as previously asserted, independent claims 3, 5 and 16 are allowable over Yi, which fails to disclose outputting the rate matched bit streams. It is respectfully submitted

that TSG_RAN fails to cure the deficiencies of Yi with respect to claims 3, 5 and 16. Therefore, it is respectfully asserted that claims 3, 5 and 16 are allowable over the cited references. It is further respectfully asserted that claim 4, which depends from claim 3, claim 6, which depends from claim 5, and claim 17, which depends from claim 16, also are allowable over the cited references notwithstanding the teachings of TSG-RAN with respect to "different initial offset values."

Allowable Subject Matter

Applicant graciously acknowledges the Examiner's indication of allowable subject matter in claims 11 and 18. As previously indicated, independent claim 7 has been amended to incorporate the allowable subject matter indicated in claim 11, which has been canceled without prejudice. Since, as noted herein, it is believed that independent claim 16 is in condition for allowance, claim 16 has not been amended to incorporate the allowable subject matter of claim 18.

New Claims

With this paper, new claims 23-37 have been added. Support for the new claims is found in the application as originally filed.

It is respectfully asserted that claim 23, which depends from claim 16, is in condition for allowance for the same reasons given herein with respect to claim 16. It is further respectfully asserted that claims 24 and 30, which recite limitations similar to claims 3, 5 and 16, and claims 25-29 and 31-34, which depend, respectively, from claims 24 and 30, are in condition for allowance for the same reasons given herein with respect to claims 3, 5 and 16. It is further respectfully asserted that claim 35, which contains the allowable subject matter from claim 11, is in condition for allowance. Moreover, it is respectfully asserted that claims 36 and 37, which recite limitations similar to those recited by claims 4, 6 and 17, are in condition for allowance for the same reasons given herein with respect to claims 4, 6 and 17.

CONCLUSION

In light of the above remarks, Applicant submits that claims 3-10, 12, 13, 16-19 and 21-37 of the present application are in condition for allowance. Reexamination and reconsideration of the application, as amended, are requested.

U.S. Patent Nos. 6,571,369 B1 and 6,519,732 to Li., U.S. Patent No. 6,437,714 B1 to Kim et al., U.S. Patent No. 6,353,638 B1 to Hottinen et al., U.S. Patent No. 6,308,294 B1 to Ghosh et al., U.S. Patent No. 6,304,991 B1 to Rowitch et al., and U.S. Patent No. 6,292,918 B1 to Sin[d]husha[ya]na et al, have been cited as being made of record and not relied upon. Applicant has studied the references and believes they neither anticipate nor render obvious the present invention either alone or in combination.

No amendment made was related to the statutory requirements of patentability unless expressly stated herein; and no amendment made was for the purpose of narrowing the scope of any claim, unless Applicant has argued herein that such amendment was made to distinguish over a particular reference or combination of references.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles, California telephone number (213) 623-2221 to discuss the steps necessary for placing the application in condition for allowance.

Respectfully submitted,

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Encl: Substitute FIGS. 1, 2, 5, 11, 12

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IN THE DRAWINGS:

Substitute drawing sheets are enclosed for FIGS. 1, 2, 5, 11 and 12 to replace the original drawing sheets filed with the application. No new matter has been added. Specifically, the following amendments have been made:

FIGS. 1 and 2: Change "CONVENTIONAL" to "PRIOR."

FIG. 5: Change all reference designators of "100" to "200."

FIG. 11: Change reference designator "100A" to "300A."

FIG. 12: Change "RECEIVDER" to "RECEIVER" and change reference designator "100" to "120."